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LAWRENCE PARK TOWNSHIP  
SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

Developed as part  
of the Implementation of the  
Pennsylvania Coastal Zone Management Program

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SUBDIVISION AND LAND DEVELOPMENT ORDINANCE  
LAWRENCE PARK TOWNSHIP, ERIE COUNTY, PENNSYLVANIA

ORDINANCE NO.       -84      

AN ORDINANCE REGULATING THE SUBDIVISION OF LAND FOR THE PURPOSE OF SALE OR BUILDING DEVELOPMENT: DEFINING TERMS, PROVIDING REGULATIONS, REQUIREMENTS AND DESIGN STANDARDS: PRESCRIBING PROCEDURES FOR THE PRESENTATION, APPROVAL AND RECORDING OF SUBDIVISION PLANS: AND PRESCRIBING PENALTIES AND VIOLATIONS.

Ordained and enacted by the Board of Commissioners of Lawrence Park Township, Erie County, Pennsylvania under the provisions of Article V of the Pennsylvania Municipalities Planning Code (Act 247 of July 31, 1968, as amended) hereinafter referred to as the "Pennsylvania Planning Code."

ARTICLE 1  
GENERAL PROVISIONS

Section 101 SHORT TITLE

This Ordinance shall be known and may be cited as "LAWRENCE PARK TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE".

Section 102 PURPOSE

This Ordinance is adopted for the following purposes:

- a. To assist the orderly and efficient development of Lawrence Park Township.
- b. To promote the health, safety, and general welfare of the residents of Lawrence Park Township.
- c. To secure equitable handling of all subdivision plans by providing uniform procedures and standards.
- d. To implement the Lawrence Park Township Comprehensive Plan Update.

Section 103 COMPLIANCE

No subdivision or land development or any lot, tract, or parcel of land shall be effected, no street, sanitary sewer, storm sewer, water main, or other facilities in connection therewith shall be laid out, constructed, opened or dedicated for public use and travel, or the common use of occupants of building abutting thereon, except in accordance with the provisions of this Ordinance. No lot in a subdivision may be sold, no permit to erect, alter or repair any building in a subdivision may be issued, unless and until a plan of such subdivision shall have been approved and properly recorded, and until the improvements required by the Board of Commissioners in connection therewith shall have either been constructed or guaranteed as herein provided.

#### Section 104    HARSHIP

Where, owing to special conditions, a literal enforcement of this Ordinance would result in unnecessary hardship, the Board of Commissioners may make such reasonable exceptions thereto as will not be contrary to the public interest, and may permit the sale of a lot, issuance of a permit, or erection of a building subject to conditions necessary to assure adequate streets and other public improvements.

#### Section 105    AMENDMENT

This Ordinance as set forth herein may be amended, altered or revised by the Board of Commissioners from time to time after a public hearing is held pursuant to public notice. In case of an amendment other than that prepared by the Planning Commission, the Board of Commissioners shall submit each such amendment to the Planning Commission and the Erie County Department of Planning for recommendation at least thirty (30) days prior to date of the public hearing.

#### Section 106    CONFLICT

Whenever there is a difference between the minimum standards or dimensions specified herein and those contained in other regulations, resolutions or ordinances of Lawrence Park Township, the highest standards shall govern.

#### Section 107    VALIDITY

Should any provision of this Ordinance be declared invalid by a court of competent jurisdiction, such decision shall not affect the validity of this Ordinance as a whole or of any other provision thereof.

#### Section 108    ERIE COUNTY DEPARTMENT OF PLANNING REVIEW

Plans of subdivisions shall be reviewed by the County Planning Department. Before the approval of a plan by Lawrence Park Township, the Township shall transmit the plan and one (1) copy of the plan to the County Planning Department for review, comments and recommendations. Pending the receipt and consideration of such comments and recommendations, the Township shall defer action thereon, but if such report is not received by the Township within forty-five (45) days from the submission of the plan to the County Planning Department, or within such further time as may be agreed upon by the Board of Commissioners, the Township may proceed to final action thereon.

#### Section 109    EFFECTIVE DATE AND REPEALER

The Ordinance shall become effective \_\_\_\_\_, 1984 and shall remain in effect until modified or rescinded by the Board of Commissioners.

ARTICLE 2  
DEFINITIONS

Unless otherwise expressly stated, the following terms shall, for the purpose of this Ordinance, have the meaning indicated.

Words in the singular include the plural, and words in the plural include the singular. The word "person" includes a corporation, unincorporated, associated, and a partnership as well as an individual. The word "building" includes "structure" and shall be construed as if followed by the words "or part thereof." The word "street" includes "road," "highway," and "land;" and "watercourse" includes "drain," "ditch," and "stream". The words "shall" or "will" are mandatory, and the words "may" and "should" are permissive.

APPLICANT: A landowner or developer, as hereinafter defined, who has filed an application for development including his heirs, successors and assigns.

APPLICATION FOR DEVELOPMENT: Every application, whether preliminary or final, required to be filed and approved prior to start of construction or development including but not limited to an application for a building permit, for the approval of a subdivision plat or plan or for the approval of a land development plan.

BLOCK: An area bounded by streets.

BOARD OF COMMISSIONERS: The duly elected governing body of Lawrence Park Township, Erie County, Pennsylvania.

BUILDING (SETBACK) LINE: An imaginary line fixed by the required yard depth measured from the property line to the nearest point that a building may be constructed to the front, side and rear yards.

CLEAR SIGHT TRIANGLE: An area of unobstructed vision at street intersections defined by lines of sight between points at a given distance from the intersection of street lines and the sight lines.

COMMON OPEN SPACE: A parcel or parcels of land or an area of water, or a combination of land and water within a development site and designed and intended for the use or enjoyment of residents of a planned residential development, not including streets, off-street parking areas, and areas set aside for public facilities.

COUNTY PLANNING DEPARTMENT: The Erie County Department of Planning, Erie County, Pennsylvania.

DEVELOPMENT PLAN: The provisions for development of a planned residential development, including a plat of subdivision, all covenants relating to use, location and bulk of buildings and other structures, intensity of use or density of development, streets, ways and parking facilities, common open space and public facilities. The phrase "provisions of the development plan" shall mean the written and graphic materials referred to in this definition.

DEVELOPER: Any landowner, agent of such landowner or tenant with the permission of such landowner, who makes or causes to be made a subdivision of land or a land development.

EASEMENT: A right granted to use certain private land for a utility or physical access, which is not inconsistent with the general property rights of the owner.

ENGINEER: A professional engineer licensed as such in Pennsylvania, duly appointed as the municipal Engineer of Lawrence Park Township.

IMPROVEMENTS: Those physical additions and changes to the land that may be necessary to produce usable and desirable lots. (Grading, water mains, sanitary sewers, storm sewers and drains, street shade trees, street signs and monuments, street paving and lights, and curbs and sidewalks).

LAND DEVELOPMENT: (1) the improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving (a) a group of two or more buildings, or (b) the division or allocation of land or space between or among two or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups or other features; (2) a subdivision of land.

LANDOWNER: The legal or beneficial owner or owners of land including the holder of an option or contract to purchase (whether or not such option or contract is subject to any condition), a lessee if he is authorized under the lease to exercise the rights of the landowner, or other persons having a proprietary interest in land, shall be deemed to be a landowner.

LOT: A parcel of land occupied or capable of being occupied by one or more structures or dwelling units in a structure, providing the requirements of this Ordinance are met.

LOT, DOUBLE FRONTAGE: A lot, having at least two sides fronting on separate streets which do not intersect while adjoining the lot.

LOT, MINIMUM AREA OF: The area of a lot computed exclusive of any portion of the right-of-way of any public thoroughfare.

MASTER PLAN: The Lawrence Park Township Comprehensive Plan Update which is the comprehensive general plan, or any of its parts, for the future growth, protection and development of Lawrence Park Township.

PENNSYLVANIA PLANNING CODE: Pennsylvania Municipalities Planning Code, Act 247 of July 31, 1968, and amendments to same as may be adopted from time to time.

PLAN, SKETCH: A free hand sketch showing the contemplated development of the subdivision and its relationship to adjacent land.

PLAN, PRELIMINARY SUBDIVISION: A tentative subdivision plan showing existing features of land and proposed street and lot layout within and adjacent to a subdivision as required in Article 6.

PLAN, FINAL SUBDIVISION: A complete and exact subdivision plan prepared for official recording as required by Article 6.

PLANNED RESIDENTIAL DEVELOPMENT: An area of land, controlled by a landowner, to be developed as a single entity for a number of dwelling units, the development plan for which does not correspond in lot size, bulk or type of dwelling, density, lot coverage and required open space to the regulations established in any one residential district created, from time to time, under the provisions of a municipal zoning ordinance.

PLANNING COMMISSION: The duly appointed Planning Commission of Lawrence Park Township, Erie County, Pennsylvania.

PLAT: The map or plan of a subdivision or land development, whether preliminary or final.

PUBLIC NOTICE: Notice published once each week for two successive weeks in a newspaper of general circulation in the municipality. Such notice shall state the time and place of the hearing and the particular nature of the matter to be considered at the hearing. The first publication shall be not more than thirty (30) days or less than fourteen (14) days from the date of the hearing.

RIGHT-OF-WAY: Land dedicated for use as a public street, alley or crosswalk, which may also be used by sewer, water, storm sewer, electric, gas, telephone and cable systems.

SOLICITOR: A professional attorney licensed as such in Pennsylvania, duly appointed as the municipal Solicitor of Lawrence Park Township.

STREET: A general term used to describe a right-of-way, municipally or privately owned, serving as a means of vehicular and pedestrian movement and access to adjacent properties, furnishing space for sewers, public utilities, and shade trees. The streets are classified by function as follows:

1. Local Street: A street used as the principal means of access to adjacent properties serving only a comparatively small number of dwellings.
2. Collector Street: A street or road connecting local streets to each other, to community facilities, and to primary or major thoroughfares, serving only the neighborhood traffic.
3. Primary or Major Thoroughfares: A street connecting district centers, servicing large volumes of through, fast traffic, preferably located outside or bounding the residential neighborhoods.
4. Others:
  - a. Alley: (or Service Drive) A strip of land over which there is a right-of-way, municipally or privately owned serving as a secondary means of access to two or more properties.
  - b. Cul-de-sac: A residential street with one end open for public vehicles and pedestrian access and the other end terminating in a vehicular turnaround.



- c. Crosswalk: A right-of-way which cuts across a block to furnish access for pedestrians to adjacent streets or properties.
- d. Marginal Access Street: A street parallel and adjacent to primary or major thoroughfares providing access to abutting properties and control of intersections with major thoroughfares.

STRUCTURE: Any man-made object having an ascertainable stationary location on or in land or water, whether or not affixed to the land.

SUBDIVIDER: A person who is the registered owner, or authorized agent of the registered owner, of land to be subdivided.

SUBDIVISION: The division or redivision of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, transfer of ownership or building or lot development: Provided, however, that the subdivision by lease of land for agricultural purposes into parcels or more than ten (10) acres, not involving any new street or easement of access or residential dwellings shall be exempted.

The term "subdivision" includes any development of a parcel of land, for example, as a shopping center, an industrial park, or a planned residential development, which involves installation of streets and/or alleys, even though the streets and alleys may not be dedicated immediately to public use and the parcel may not be divided immediately for purposes of conveyance, transfer or sale.

SUBDIVISION, MAJOR: A subdivision containing more than five (5) lots requiring the submission by the subdivider and approval by the Board of Commissioners (either conditional or final) of Preliminary and Final Subdivision Plans, and any subdivision involving a new street, alley, or crosswalk right-of-way or a new easement.

SUBDIVISION, MINOR: A subdivision containing five (5) lots or less served by an existing public street wherein the Board of Commissioners may waive the requirements of submitting a Preliminary Subdivision Plan provided the Final Subdivision Plan meets all the requirements of this Ordinance.

SUBSTANTIALLY COMPLETED: Where, in the judgment of the Engineer, at least ninety per cent (90%) (based on the cost of the required improvements for which financial security was posted) of those improvements required as a condition for final approval have been completed in accordance with the approved plan, so that the project will be able to be used, occupied or operated for its intended use.

TOWNSHIP: Lawrence Park Township, Erie County, Pennsylvania.

ARTICLE 3  
PLAN PROCESSING PROCEDURES

Section 301 PRE-APPLICATION

Prior to making formal application, the subdivider is urged to appear before the Planning Commission at any regular or special meeting to discuss the general nature of his proposed development. If desired, a Sketch Plan may be prepared and presented for review and discussion at this time. The Sketch Plan should generally include those items listed in Article 6, Section 601 of this Ordinance.

The Planning Commission shall advise the subdivider whether the plans and data as submitted do or do not meet the objectives of this Ordinance. When the Planning Commission finds the plans and data do not meet the objectives of this Ordinance, it shall express its reasons therefor.

The subdivider may also submit his proposed development to the County Planning Department and, when on-lot septic systems are contemplated, the subdivider should confer with the County Health Department.

Such discussions and/or Sketch Plan review will be considered confidential. Submission of a Sketch Plan shall not constitute formal filing of a Subdivision Plan.

If a subdivision is deemed a Minor Subdivision, the subdivider shall then submit a Final Plan and is not required to have conditional approval of a Preliminary Plan. A subdivision shall be considered a minor subdivision if:

- a. No new street, alley or crosswalk right-of-way is involved, and
- b. the extension of sewers, water lines or storm sewers do not involve any new drainage or utility easements, and
- c. the number of new lots involved does not exceed five (5).

Section 302 CONDITIONAL APPROVAL OF PRELIMINARY PLAN

On reaching conclusions informally, as recommended in Section 301, regarding his general program and objectives, the subdivider shall cause to be prepared a Preliminary Plan, together with improvement plans and other supplementary material as specified in Article 6, Section 602 of this Ordinance.

The Preliminary Plan and other exhibits required for approval and at least two (2) copies of the Plan shall be submitted to the County Planning Department for its review, which shall retain one (1) copy of the Preliminary Plan.

Upon completion of the County Planning Department's review or after forty-five (45) days, whichever comes first, the Preliminary Plan and other exhibits required for approval and at least one (1) copy of the Plan shall be submitted to the Planning Commission for review and conditional approval at least ten (10) days prior to the meeting at which it is to be considered.

Following the review of the Preliminary Plan and other exhibits required for approval, and negotiations with the subdivider on any changes deemed advisable and the kind and extent of improvements to be made by him, the Planning Commission shall submit the Preliminary Plan and supplementary material specified and at least one (1) copy of the Plan and a report of its recommendations to the Board of Commissioners within fifteen (15) days.

The Board of Commissioners shall take action at a regular meeting within ninety (90) days after the receipt of the Planning Commission report. The Board of Commissioners may grant conditional approval subject to such conditions as it may require to carry out this Ordinance. If conditional approval is refused, the Board of Commissioners shall state its reasons to the subdivider. The decision of the Board of Commissioners shall be communicated to the subdivider personally or mailed to his last known address not later than fifteen (15) days following the decision.

Before acting on the Preliminary Plan, the Board of Commissioners may arrange for a public hearing thereon. Adequate Public Notice shall be given.

Any modification of the Preliminary Plan required by the Board of Commissioners as a prerequisite to approval shall be noted on the Preliminary Plan and at least one (1) copy of the Plan.

The conditionally approved Preliminary Plan shall be returned to the subdivider and one (1) copy of the Plan shall be retained by the Board of Commissioners.

Conditional approval of a Preliminary Plan shall not constitute approval of the Final Plan. Rather, it shall be deemed an expression of approval of the layout submitted on the Preliminary Plan as a guide to the preparation of the Final Plan.

### Section 303 APPROVAL OF FINAL PLAN

If the proposed subdivision is a Major Subdivision, the Final Plan shall conform substantially to the Preliminary Plan as conditionally approved, and, if desired by the subdivider, it may constitute only that portion of the approved Preliminary Plan which he proposes to record and develop at that time. The Final Plan shall be submitted within five (5) years of the conditional approval of the Preliminary Plan by the Board of Commissioners, otherwise such conditional approval shall become null and void.

If the proposed subdivision is a Minor Subdivision, the subdivider shall cause to be prepared a Final Plan, together with improvement plans and supplementary material as specified in Article 6, Section 603 of this Ordinance.

The Final Plan and other exhibits required for approval and at least five (5) copies of the Plan shall be submitted to the County Planning Department for its review, which shall retain one (1) copy of the Final Plan.

Upon completion of the County Planning Department's review or after forty-five (45) days, whichever comes first, the Final Plan and other exhibits required for approval and at least four (4) copies of the Plan shall be submitted to the Planning Commission for review and approval at least ten (10) days prior to the meeting at which it is to be considered.

If the Planning Commission finds that the Final Plan is in conformance with this Ordinance, it shall sign the Plan and submit it to the Board of Commissioners.

If the Planning Commission finds that the Final Plan is not in conformance with this Ordinance, it shall not sign the Plan, and shall notify the subdivider as to the section(s) of this Ordinance that is not being complied with. The Planning Commission shall offer assistance and advice to the subdivider on how best to comply with the section(s). If after negotiations with the subdivider, the subdivider wishes to seek a waiver from the section(s), the Planning Commission shall submit a report of its recommendation of approval or disapproval and the reasons for such recommendation to the Board of Commissioners within fifteen (15) days. At its next regular meeting, the Board of Commissioners shall approve or disapprove the waiver after consideration of the Planning Commission report by resolution. If the waiver is approved, the Planning Commission shall sign the Plan at its next regular meeting and submit it to the Board of Commissioners.

The Board of Commissioners shall take action at a regular meeting by resolution within ninety (90) days after the receipt of the signed Plan from the Planning Commission. The decision of the Board of Commissioners shall be communicated to the subdivider personally or mailed to his last known address not later than fifteen (15) days following the decision.

Before acting on the Final Plan, the Board of Commissioners may arrange for a public hearing thereon. Adequate Public Notice shall be given. If a public hearing has been held upon a Preliminary Plan, a public hearing shall not be required upon the Final Plan unless the Final Plan departs substantially from the Preliminary Plan.

If the Board of Commissioners approves the Final Plan, it shall sign the Final Plan and the four (4) copies. The approved Final Plan and three (3) copies of the Plan shall be returned to the subdivider for recording and one (1) copy of the approved Plan shall be retained by the Board of Commissioners.

If the Board of Commissioners disapproves the Final Plan, it shall not sign the Plan, and shall notify the subdivider as to the reasons for disapproval. The disapproved Final Plan and three (3) copies of the Plan shall be returned to the subdivider and one (1) copy of the disapproved Plan shall be retained by the Board of Commissioners.

No Plan shall receive Final Plan approval by the Board of Commissioners unless the subdivider shall have filed with the Board of Commissioners a performance bond in favor of the Township or other assurance acceptable to the Board of Commissioners, or shall have completed all required improvements listed in Article 5, or as the Board of Commissioners may require in the public interest.

Upon completion of the improvements in accordance with the specifications of the Township, the subdivider shall take steps to dedicate the improvements and have the same accepted by the Board of Commissioners.

#### Section 304 RECORDING

The approved Final Plan shall be filed with the Erie County Recorder of Deeds before proceeding with the sale of any lots or the construction of any buildings.

In accordance with Section 512 of the Pennsylvania Planning Code, the approved Final Plan shall be presented by the subdivider for recording to the Office of the Recorder of Deeds for Erie County, Pennsylvania within ninety (90) days after the final approval by the Board of Commissioners, or such approval shall be considered null and void. Reapproval thereafter may be granted by the Board of Commissioners provided no changes have been made to the Final Plan.

Recording the Final Plan after approval by the Board of Commissioners shall have the effect of an irrevocable offer to dedicate all street rights-of-way and other public ways to public use, and to dedicate or reserve all park reservations and other public areas to public use unless reserved by the subdivider as hereinafter provided.

The Board of Commissioners may require the subdivider to place a notation on the Final Plan to the effect that there is no acceptance of dedication to the public of a certain designated "public" area, or in unusual circumstances, a street or alley, in which event the title to such area shall remain with the owner as a lot of record, and the Township shall assume no responsibility for improvement or maintenance thereof, which fact shall also be noted on the Final Plan.

#### Section 305 COMPLETION OF IMPROVEMENTS OR GUARANTEE

No plat shall be finally approved unless the streets shown have been improved to a mud-free or otherwise permanently passable condition, or improved as may be required by this Ordinance and any walkways, curbs, gutters, street lights, fire hydrants, shade trees, water mains, sanitary sewers, storm drains and other improvements as may be required by this Ordinance, have been installed in accordance with this Ordinance.

In lieu of the completion of any improvements required as a condition for the final approval of a plat, this Ordinance provides for the deposit with the Township of financial security in an amount sufficient to cover the costs of any improvements or common amenities including, but not limited to, roads, storm water detention and/or retention basins and other related drainage facilities, recreational facilities, open space improvements, or buffer or screen plantings which may be required. Without limitation as to other types of financial security which the Township may approve, which approval shall not be unreasonably withheld. Federal or Commonwealth chartered lending institution irrevocable letters of credit and restrictive or escrow accounts in such lending institutions shall be deemed acceptable financial security for the purposes of this section.

Such financial security shall be posted with a bonding company or Federal or Commonwealth chartered lending institution chosen by the party posting the financial security, provided said bonding company or lending institution is authorized to conduct such business within the Commonwealth. Such bond, or other security shall provide for, and secure to the public, the completion of any improvements which may be required within one (1) year of the date fixed in the subdivision plat for completion of such improvements. The amount of financial security shall be equal to one hundred ten (110) percent of the cost of the required improvements for which financial security is to be posted. The cost of the improvements shall be established by submission to the Board of Commissioners of bona fide bid or bids from the contractor or contractors chosen by the party posting the financial

security to complete the improvements or, in the absence of such bona fide bids, the cost shall be established by estimate prepared by the municipal Engineer.

If the party posting the financial security requires more than one (1) year from this date of posting of the financial security to complete the required improvements, the amount of financial security may be increased by an addition ten (10) percent for each one (1) year period beyond the first anniversary date from posting of financial security or to an amount not exceeding one hundred ten (110) percent of the cost of completing the required improvements as reestablished on or about the expiration of the preceding one (1) year period by using the above bidding procedure. In the case where development is projected over a period of years, the Board of Commissioners may authorize submission of final plats by section or stages of development subject to such requirements or guarantees as to improvements in future sections or stages of development as it finds essential for the protection of any finally approved section of the development.

As the work of installing the required improvements proceeds, the party posting the financial security may request the Board of Commissioners to release or authorize the release, from time to time, such portions of the financial security necessary for payment to the contractor or contractors performing the work. Any such request shall be in writing addressed to the Board of Commissioners and the Board of Commissioners shall have forty-five (45) days from receipt of such request within which to allow the municipal Engineer to certify, in writing, to the Board of Commissioners that such portion of the work upon the improvements has been completed in accordance with the approved plat. Upon such certification the Board of Commissioners shall authorize release by the bonding company or lending institution of an amount as estimated by the municipal Engineer fairly representing the value of the improvements completed or, if the Board of Commissioners fails to act within said forty-five (45) day period, the Board of Commissioners shall be deemed to have approved the release of funds as requested. The Board of Commissioners may, prior to final release at the time of completion and certification by its Engineer, require retention of ten (10) percent of the estimated cost of the aforesaid improvements.

Where the Board of Commissioners accepts dedication of all or some of the required improvements following completion, the Board of Commissioners may require the posting of financial security to secure structural integrity of said improvements as well as the functioning of said improvements in accordance with the design and specifications as depicted on the final plat for a term not to exceed eighteen (18) months from the date of acceptance and dedication. Said financial security shall be of the same type as otherwise required in this section with regard to installation of such improvements, and the amount of the financial security shall not exceed fifteen (15) percent of the actual cost of installation of said improvements.

If water mains or sanitary sewer lines or both, along with apparatus or facilities related thereto, are to be installed under the jurisdiction and pursuant to the rules and regulations of a municipal authority separate and distinct from the Township, financial security to assure proper completion and maintenance thereof shall be posted in accordance with the regulations of the controlling municipal authority and shall not be included within the financial security as otherwise required by this section.

If financial security has been provided in lieu of the completion of improvements required as a condition for the final approval of a plat as set forth in this section, the Township shall not condition the issuance of building or other permits relating to the erection or placement of improvements, including buildings, upon the lots or land as depicted upon the final plat upon actual completion of the improvements depicted upon the approved final plat. Moreover, if said financial security has been provided, occupancy permits for any building or buildings to be erected shall not be withheld following the improvement of the streets providing access to and from existing public roads to such building or buildings to a mud-free or otherwise permanently passable condition, as well as the completion of all other improvements as depicted upon the approved plat, either upon the lot or lots or beyond the lot or lots in question if such improvements are necessary for the reasonable use of or occupancy of the building or buildings.

#### Section 306 RELEASE FROM IMPROVEMENT BOND

When the developer has completed all of the necessary and appropriate improvements, the developer shall notify the municipal Engineer in writing, by certified or registered mail, of the completion of the aforesaid improvements. The Board of Commissioners shall, within ten (10) days after receipt of such notice, direct and authorize the municipal Engineer to inspect all of the aforesaid improvements. The municipal Engineer shall, thereupon, file a report, in writing, with the Board of Commissioners, and shall promptly mail a copy of the same to the developer by certified or registered mail. The report shall be made and mailed within thirty (30) days after receipt by the municipal Engineer of the aforesaid authorization from the Board of Commissioners; and said report shall be detailed and shall indicate approval or rejection of said improvements, or any portion thereof, shall not be approved or shall be rejected by the municipal Engineer, said report shall contain a statement of reasons for such non-approval or rejection.

The Board of Commissioners shall notify the developer, in writing by certified or registered mail of the action taken.

If the Board of Commissioners or the municipal Engineer fails to comply with the time limitation provisions contained herein, all improvements will be deemed to have been approved and the developer shall be released from all liability, pursuant to its performance guaranty bond or other security agreement.

If any portion of the said improvements shall not be approved or shall be rejected by the Board of Commissioners, the developer shall proceed to complete the same and, upon completion, the same procedure of notification, as outlined herein, shall be followed.

#### Section 307 REMEDIES TO EFFECT COMPLETION OF IMPROVEMENTS

In the event that any improvements which may be required have not been installed as provided in this Ordinance or in accord with the approved final plat, the Board of Commissioners is hereby granted the power to enforce any corporate bond, or other security by appropriate legal and equitable remedies. If proceeds of such bond, or other security are insufficient to pay the cost of installing or making repairs or corrections to all the improvements covered by said security, the Board

of Commissioners may, at its option, install part of such improvements in all or part of the subdivision or land development and may institute appropriate legal or equitable action to recover the moneys necessary to complete the remainder of the improvements. All of the proceeds, whether resulting from the security or from any legal or equitable action brought against the developer, or both, shall be used solely for the installation of the improvements covered by such security, and not for any other municipal purpose.



ARTICLE 4  
DESIGN STANDARDS

Section 401 GENERAL REQUIREMENTS

In the layout, development and improvement of a subdivision, the subdivider shall comply with all adopted standards, specifications, codes, and ordinances of the Township which are applicable and in addition shall meet the standards of design and principles of land subdivision set forth in this article.

The standards and details of design herein contained are intended only as minimum requirements so that the general arrangements and layout of a subdivision may be adjusted to a wide variety of circumstances. However, in the design and development of the subdivision plan, the subdivider should use standards consistent with the site conditions so as to ensure an economical, aesthetic and durable subdivision.

Section 402 NATURAL FEATURES, FLOOD PLAINS AND LAKE BLUFFS

Existing natural features such as trees, steep slopes, water courses, and historic places shall be preserved as a conservation measure except to the extent that their removal or modification is functionally related to the harmonious design of the subdivision.

Land subject to flooding by stream or wave action and land deemed by the Board of Commissioners, or other official authority, to be uninhabitable shall not be platted for residential occupancy, nor for such other uses as may involve danger to health, life, or property or aggravate the flood hazard, and such land within that area of the plan shall be set aside for such uses as shall not be endangered by periodic or occasional inundation.

In addition to the requirements of this Ordinance, all land subject to flooding shall comply with the regulations of the Lawrence Park Township Flood Plain Ordinance before a subdivision plat may be approved by the Board of Commissioners.

In addition to the requirements of this Ordinance, all land within the Lake Erie bluff recession hazard area shall comply with the regulations of the Lawrence Park Township Bluff Setback Ordinance before a subdivision plat may be approved by the Board of Commissioners.

Section 403 STREETS

The arrangement, character, extent, width, grade and location of all streets shall conform to the Master Plan and shall be considered in their relation to existing and planned streets, to topographical conditions, to public convenience and safety, and in their appropriate relation to the proposed uses of the land to be served by such streets.

Where such is not shown in the Master Plan, the arrangement of streets in a subdivision shall either:

- a. provide for the continuation or appropriate projection of existing streets in surrounding areas; and
- b. conform to a plan for the neighborhood approved by the Board of Commissioners after consideration of the recommendations of the Planning Commission to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impractical.

Local streets shall be so laid out that their use by through traffic will be discouraged. However, permanent culs-de-sac should be avoided.

Where a subdivision borders on or contains a railroad right-of-way, the Board of Commissioners may require a street approximately parallel to and on each side of such right-of-way, at a distance suitable for the appropriate use of the intervening land, as for park purposes in residential districts, or for commercial or industrial purposes in appropriate districts. Such distances shall also be determined with due regard for the requirements of approach grades and future grade separations.

Street jogs with centerline offsets of less than one hundred and twenty-five (125') feet shall be avoided.

A tangent at least one hundred (100') feet long shall be introduced between reverse curves on major thoroughfares and collector streets.

Multiple intersections involving the junction of more than two streets should be avoided, and where such avoidance is impossible as determined by the Board of Commissioners, such intersections shall be designated with extreme care for both vehicular and pedestrian safety.

Right angle intersections shall be used whenever practicable, especially when local residential streets empty into major or collector thoroughfares and there shall be no intersection angle, measured at the center line, of less than seventy (70°) degrees.

Street curb intersections shall be rounded by a tangential arc with a minimum radius of fifteen (15') feet for local residential streets and thirty (30') feet for intersections involving collector streets and primary or major thoroughfares.

If the lots resulting from the original development are large enough for resubdivision, or if a portion of the tract is not subdivided, suitable access and street openings for such eventuality shall be provided by temporary culs-de-sac.

Reserve strips controlling access or egress may be permitted. New streets shall be provided through to the boundary lines of the development especially if it adjoins substantial acreage by temporary culs-de-sac.

Streets that are extensions of, or obviously in alignment with, existing named streets shall bear the names of the existing streets subject to the approval of the Board of Commissioners and the Erie Post Office. No street names shall be used which will duplicate or be confused with the names of existing streets.

Street dimensions, grades and alignment shall meet the following standards:

<u>Street Type/ Design Standards</u>	<u>Minimum Right-of-Way (note 1)</u>	<u>Minimum Cartway Width</u>	<u>Maximum Grade</u>	<u>Minimum Grade</u>	<u>Minimum Radii of Centerline</u>	<u>Minimum Sight Distance (note 2)</u>
Major Thoroughfares	80'	36'	5.0%	0.5%	500'	400'
Collector Streets	60'	32'	7.5%	0.5%	400'	300'
Local Streets (note 3)	50'	28'	10.0%	0.5%	200'	200'
Marginal Access Streets	40'	24'	10.0%	0.5%	100'	100'
Alleys	20'	20'	10.0%	0.5%	50'	50'
Crosswalks	12'	8'	---	---	---	---

NOTES:

- (1) Additional widths may be required upon findings that the same are required for:  
(a) Public safety and convenience; (b) Parking in commercial or public use areas; (c) Existing street, alley or crosswalk rights-of-way which do not provide the above mentioned minimum widths, and where as a consequence, additional dedication is necessary.
- (2) Sight Distance shall be measured along the centerline at eye level. Proper sight lines should be maintained at all intersections or streets. Measured along the center line, there should be a clear sight triangle the specified sight distance from the point of intersection. No future building or obstruction shall be permitted in this area.
- (3) Culs-de-sac shall be designated with a turn-around having a minimum outside cartway diameter of one hundred (100') feet and a minimum property line diameter of one hundred twenty (120') feet.

Section 404 ALLEYS

Wherever possible, alleys should be avoided in residential areas. In no event are alleys to be utilized as the primary means of access to residential properties.

Alleys shall be provided in commercial and industrial districts, except that this requirement may be waived where other definite and assured provision is made for service access, such as off-street loading, unloading, and parking consistent with and adequate for the uses proposed.

Alley intersections and sharp changes in alignment shall be avoided, but where necessary, corners shall be cut off sufficiently to permit safe vehicular movement.

Deadend alleys shall be avoided where possible, but if unavoidable, shall be provided with adequate turn-around facilities at the deadend, as determined by the Board of Commissioners.

#### Section 405 BLOCKS

All blocks in a subdivision shall have a maximum length of fourteen hundred (1400') feet. Such blocks containing individual lots shall be at least two (2) lot depths in width, except lots along a major thoroughfare which front on an interior street. Modification of the above requirements are possible in commercial and industrial developments.

A minimum of eight hundred (800') feet shall be maintained between intersecting local and collector streets with a primary street or major thoroughfare which intersect on the same side of such major thoroughfare.

In large blocks with interior parks, in exceptionally long blocks, or where access to a school or shopping center is necessary, a crosswalk shall be provided.

#### Section 406 LOTS

The lot size, width, depth, shape, orientation, and the minimum building setback lines shall be appropriate for the location of the subdivision and for the type of development and use contemplated.

Lot dimensions shall conform to the requirements of the Lawrence Park Township Zoning Ordinance. Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for the off-street service and parking facilities required by the type of use and development contemplated.

The subdividing of the land shall be such as to provide, by means of a public street, each lot with satisfactory access to an existing public street.

Double frontage lots should be avoided except where essential to provide separation of residential development from traffic arteries or to overcome specific disadvantages of topography and orientation.

Side lot lines shall be substantially at right angles or radial to street lines.

#### Section 407 EASEMENTS AND RIGHTS-OF-WAY

To the fullest extent possible, easements should be centered on or be adjacent to rear or side lot lines. Such easements shall have a minimum width of at least twenty (20') feet.

If sewer, water, gas, electrical, telephone, street lighting, or other public utility facilities are to be located within street rights-of-way, their location and installation shall be coordinated so that they may be added to, repaired, or enlarged at minimum cost.

Where a subdivision is traversed by a water course, drainage way, channel, or stream, there shall be provided a storm water easement conforming substantially with the lines of such water course and be of such width to be adequate for the purpose.

#### Section 408 BUILDING LINES

The minimum building set-back shall conform with the provisions of the Lawrence Park Township Zoning Ordinance.

ARTICLE 5  
IMPROVEMENTS

Section 501 GENERAL

All of the required improvements specified in this Article shall be constructed in accordance with other articles of this Ordinance and all other applicable Township, County and State regulations and approved by the Board of Commissioners and its municipal Engineer.

Section 502 MONUMENTS

Concrete monuments shall be installed to provide permanent horizontal control for the subdivision. The monuments shall be set along street property lines and along subdivision boundaries:

- a. At the beginning and ending of all street curves.
- b. At the intersection of street lines.
- c. At the intersection of all lines forming angles in the subdivision boundary.

The monument shall be a 6-inch by 6-inch by 30-inch concrete shaft with a 1/2-inch diameter steel rod embedded in the center protruding approximately 1/2-inch from the top surface.

Monuments shall be placed so that the marked point shall coincide exactly with the intersection of lines to be marked, and shall be set so that the top of the monument is level with the finished grade.

Any monuments that are destroyed or removed shall be replaced by a registered engineer or surveyor. Where grading conditions or other circumstances prohibit the placing of monuments at the time of submission of the Final Plan, a cash deposit will be made with the Township in an amount to be determined by the Commissioners.

Section 503 STREETS

Storm Sewers - The work to be included is the installation of storm sewer lines in accordance with accepted practice and in compliance with the Materials and Method of Construction outlined below.

- a. Excavation - The contractor shall do all excavation of whatever substance encountered to the depth required to install the sewer to the lines and grades. The banks of the trench shall be vertical. Width of the trench allowed shall be 12 inches on each side of the pipe bell. Excavated material not suitable or not required for fill or backfill shall be removed from the site and disposed of.

Excavation for manholes and catch basins shall allow for only 24 inches of clearance on all sides.

Excavation shall not be carried below the required level. Excess excavation shall be backfilled with sand, gravel, or concrete, as directed by the engineer and thoroughly tamped.

Unstable soil shall be removed and replaced with approved backfill of gravel, crushed stone or crushed slag, which shall be thoroughly tamped. The engineer shall determine the depth of removal of the unstable soil.

Water, which has accumulated in the excavation, shall be removed by pumping or other means approved by the Engineer.

In rock, excavation shall be carried to 8 inches below the bottom of the pipe and special refill material shall be used to establish the proper grade. This material shall be as stated in the materials section.

The bottom of the trench shall be rounded so that an arc of the circumference equal to 0.6 of the outside diameter of the pipe rests on undisturbed soil. Bell holes shall be excavated accurately to size by hand.

- b. Materials - All materials shall be furnished by an established and reputable supplier or manufacturer. All materials shall be guaranteed to perform the service required and shall conform with the following specifications or shall be a product similar and equal thereto as approved by the engineer.

Pipe shall conform to the proper ASTM Specifications and the Pennsylvania Department of Transportation, Pub. 408, and shall be subject to approval by the engineer.

Concrete used for encasements, manhole bases and backfill shall be ready-mixed cement concrete designed for 3300 psi compressive strength after 28 days and shall meet all the requirements for Class A concrete as specified in Section 704 of Pennsylvania Department of Transportation, Pub. 408.

Mortar used for manholes, catch basins, and pipe joints shall be machine mixed in an acceptable manner at the site by the Contractor and shall consist of 1 part Portland Cement and 2½ parts fine aggregate by volume. Water or other components shall not be introduced into this mix after removal from the mixer.

Special refill material used for bedding in rock excavation shall consist of sand or #57 aggregate, as determined by the engineer, and shall conform to the specifications in Section 703.2 of Pennsylvania Department of Transportation, Pub. 408.

Special backfill material used for trench backfill shall consist of a well graded bank-run gravel in accordance with the following specification and should be free of any deleterious matter.

### Gradation Requirement

<u>Sieve Size</u>	<u>Percent Passing by Weight</u>
3"	100
3/8"	50 - 100
# 4	40 - 85
10	30 - 75
40	15 - 45
200	5 - 15

Liquid Limit, 25% - maximum Plasticity Index, 7 Maximum

Lumber used for sheeting may consist of any species which will satisfactorily stand driving. It shall be free from worm holes, loose knots, wind shakes, decayed or unsound portions, or other defects which might impair its strength or tightness. Minimum thickness shall be 2 inches nominal. Lumber for bracing shall be sound and shall be equal to or better than No. 2 common yard lumber.

- c. Joints - Joints shall comply with the pipe manufacturer's recommendations for the intended use.
- d. Laying of Pipe - All sewers shall be laid true to line and grade. The sections of the pipe shall be laid and fitted together that when completed, the sewer will have a smooth and uniform invert. The pipe shall be kept thoroughly clean so that jointing compounds will adhere. Each pipe shall be inspected for defects before being lowered into the trench, and if defects are found even after laying of the pipe is completed, it shall be removed and replaced with a new pipe. No water shall be allowed in the trench while pipes are being laid, and the exposed end shall be capped if left in trench for more than one (1) hour without installing the next section. No more than 100 feet of trench shall be opened in advance of pipe laying unless permitted by the Engineer.

The interior of the sewer shall be kept cleared of all dirt as the work progresses.

- e. Backfill - No sewers shall be backfilled above the top of the pipe until the sewer elevations, gradient, alignment, and the pipe joints have been checked, inspected, and approved. No heavy rock or boulders more than 6 inches in diameter will be allowed within three (3) feet of the pipe, and no stones over 1½ inches in diameter will be allowed in the first 18 inches of the backfill.

The space between the pipe and the side of the trench shall be backfilled in four-inch layers and thoroughly mechanically tamped until a height of one foot above the pipe is reached, and then layers of six inches will be allowed before the tamping is performed.

Backfill around manholes and catch basins shall be done after all forms, debris and trash are removed and cleared away. Suitable material as for trench backfilling shall be placed symmetrically on all sides in 8-inch layers.



All backfill shall be thoroughly mechanically tamped in layers to meet the compaction requirements of 95% of standard proctor (ASTM D698-78).

When excavated material is not satisfactory for backfill, special backfill material shall be secured to use in backfilling operations. All surplus material, unsatisfactory material, earth, rubbish, or other debris shall be hauled away from the site and disposed of.

- f. Manholes - Manholes shall be precast reinforced concrete construction, with aluminum or plastic coated manhole steps and O-ring rubber gaskets. Precast manholes shall meet or exceed ASTM Specification C-478. Eccentric cone top sections shall be used unless a variance or waiver is furnished in writing by the Engineer.

A poured in place 8-inch concrete base of Class A concrete, as noted in the materials section, shall be constructed as a leveling pad before the precast manhole can be placed.

The Contractor may upon written request and written approval of the Engineer construct brick or block manholes. All bricks and blocks shall conform to accepted standards and shall be new and clean. The brick shall conform to ASTM Specifications C-32 and the block shall conform to ASTM Specification C-139.

Manhole frames and covers shall be equal to Allegany Foundry Co., frame pattern 650 and cover pattern 651. The frame casting and cover casting shall have the metal bearing areas that come in contact machine ground to fix in pairs, shall be marked as pairs, and shall be delivered in pairs.

- g. Catch Basins - Catch basins shall be of brick and/or block construction. All bricks and blocks shall conform to accepted standards and shall be new and clean.

Catch basin frames, grates, and curb boxes shall be equal to Allegany Foundry Co., frame pattern 630, grate pattern 631, and curb box pattern 632. The frame casting, grate casting, and curb box casting shall have the metal bearing areas that come in contact machined to fix these three pieces as one unit, shall be marked as one unit, and shall be delivered as one unit.

Flexible Pavements - The work to be included is the installation of plant-mixed Bituminous Concrete Pavement in accordance with accepted practice and in compliance with the Materials and Method of Construction outlined below. Higher grade pavements (e.g. Cement Concrete) will be considered upon written request.

- a. Grading - All details of the cross-section, crowns, curb, pavement, sub-grade, sub-drains, and roadside ditches, shall be graded and/or constructed to conform to the designated cross-section as provided by the Township Engineer and approved by the Board of Commissioners.

Grade stakes shall be placed on each side of the street at maximum intervals of fifty feet (50') and so located as to remain in place until the completion and approval of the bituminous base course.

Grade stakes removed prior to the completion of the bituminous base course shall be replaced before any further work is done on the street.

- b. The Sub-Grade - The bottom of the excavation and/or top of embankment between the outer limits of the base course, or sub-base is considered sub-grade and shall conform to specified line, grades and cross-sections. Mainly the area that is prepared to receive the placement of the base course, or sub-base, is defined as sub-grade.

Materials and Sub-Grade Classifications: The sub-grade and sub-grade material can be classified as good, fair, and poor. Good - This class includes granular materials such as sand, sandy gravel with less than 10% passing a No. 200 mesh sieve. This type material can be compacted to produce a firm layer and have a minimum C.B.R. value of 12. Fair - This class includes soils which have a satisfactory performance record from the standpoint of freezing and thawing. These are primarily sandy, gravelly or non-plastic clay loam soils with a C.B.R. value ranging from 5 to 12. Poor - This class includes all soils which have a poor performance record from the standpoint of freezing and thawing. These are primarily soft plastic clay or silty materials where the clay or silt content is more than 50% with a C.B.R. value ranging from 2.5 to 5.

Construction Methods: The sub-grade shall be shaped to true lines and elevations and shall have a minimum width of the width of the pavement plus two (2) feet. Adequate drainage facilities shall be installed to provide for the disposition of underground seepage and the percolation of surfact water. The sub-grade shall be thoroughly compacted by power rollers with a minimum weight of 10 tons to insure satisfactory densification and stabilization. It shall be compacted near optimum moisture content in accordance with Pennsylvania Department of Transportation Specifications, Pub. 408, Section 210.3(b). The finish surfact shall be uniformly shaped to facilitate drainage and any irregularities from theoretical grade shall be corrected prior to placing the sub-base.

If the material encountered in the normal excavation has a C.B.R. value of less than 2.5 and is not of proper quality to develop the required stability and provide for adequate drainage, other material shall be installed. This material shall meet the requirements of sub-grade material, preferably of granular character, and installed to a depth of at least 12 inches. It should then be brought to a firm and thoroughly compacted surfact as mentioned in the above paragraph.

Prior to placing the sub-base, the engineer shall inspect the sub-grade area. From visual inspection, he will designate where sub-drains shall be installed. If any unstable areas are found, the material shall be removed and replaced with suitable material and thoroughly compacted. The replacement material shall be stone or gravel approved by the Pennsylvania Department of Transportation for replacement of unstable sub-grade.

Such unsuitable areas shall be excavated and undercut to the required depth for accommodating the placing of sufficient granular or other suitable sub-grade material.

The prepared sub-grade shall be protected by the Contractor to prevent undue rutting from trucks or other equipment, and if such damage does occur, the sub-grade shall be reshaped and compacted prior to placing the sub-base material.

- c. Sub-Drains Under Pavement - Sub-drain shall be laid along the entire length of all streets and at locations to be determined in each case by the Township Engineer. Blind or side drains at intervals as required by the Township Engineer shall be installed leading into the main sub-drain. The required interval for side drains shall be related to ground water conditions but in no case shall this interval be greater than one hundred (100) feet. If conditions require, six (6) inch corrugated metal perforated pipe shall be installed in the side drains. Blind or side drains shall extend to the curb lines.

In parts of the Township where the natural ground is a well-drained gravel, sub-drain requirements may be relaxed. Deviation from the sub-drain requirements will be considered upon written request and each case considered separately.

In general, the sub-drain shall be built as follows:

After the sub-grade has been shaped, the sub-drain will be installed.

The trench for the sub-drain will be a minimum of fifteen (15) inches wide and be dug to a minimum depth of thirty (30) inches below the bottom of the sub-base where possible.

A layer of #57 in stone in accordance with the gradation requirements as specified by the Pennsylvania Department of Transportation, Pub. 408, Section 703.2 will be placed to a depth of the three (3) inches in the bottom of the trench and six (6) inch corrugated metal pipe laid in the center of the trench.

The entire trench to the top of the sub-grade will be filled with #57 stone.

Care must be taken to assure that the stone in the sub or side drain remains clean and in good contact with the stone or gravel in the sub-base.

Sub-drains shall generally empty into storm sewer catch basins or manholes and shall enter at or above the spring line of the main storm sewer line at that location. The specified depth of sub-drain may have to be modified at and near such catch basins and manholes but will be brought to specified depths as quickly as practicable.

- d. The Sub-Base - All utilities, including water, gas, sanitary sewers, storm sewers, buried conduits of any kind or any other structures or lines shall be placed prior to the laying of the sub-base.

The sub-base shall be made of approved gravel or stone and shall have a minimum thickness at any point of six (6) inches when compacted. Additional depth of sub-base may be called for.

The material and method of construction used shall conform to the Pennsylvania Department of Transportation Specifications, Pub. 408, Section 350.

The sub-base materials shall be placed evenly and rolled in two separate layers of at least three (3) inches each. Rolling shall be done with a three wheel-power roller weighing not less than ten (10) tons and shall begin at the sides and continue towards the center. Rolling shall continue until there is not movement of the surface ahead of the roller with compaction results meeting the requirements of the Pennsylvania Department of Transportation Specifications, Pub. 408, Section 350.3(e).

The sub-base shall be thoroughly compacted and shaped to the proper grade and cross-section to receive the bituminous base course.

The finished sub-base shall be inspected and approved before placing of the bituminous base course.

- e. The Bituminous Base Course - The bituminous base course shall follow, be made up, and be laid in accordance with the following specifications:

Specifications of the Department of Transportation, Commonwealth of Pennsylvania, Pub. 408, current edition, Section 305, "Bituminous Concrete Base Course".

The bituminous base course shall be laid to a minimum thickness when compacted of three (3) inches.

Under certain conditions, the bituminous base course may be eliminated; but if this is the case, then a bituminous tack coat as specified in Department of Transportation, Commonwealth of Pennsylvania, Pub. 408, Section 460 will be required.

The bituminous base course must be inspected and approved prior to the laying of the bituminous binder course.

- f. The Bituminous Binder Course - A bituminous tack coat as specified in Department of Transportation, Commonwealth of Pennsylvania, Pub. 408, Section 460, will be required in all cases where the bituminous base course has been in place for a period in excess of ninety-six hours prior to the placing of the bituminous binder course or in any case where the use of such tack coat is determined to be necessary.

The bituminous binder course shall follow, be made up of and laid in accordance with the following specifications:

Specifications of the Department of Transportation Commonwealth of Pennsylvania, Pub. 408, Section 421, "Bituminous Binder Course ID-2".

The bituminous binder course shall be laid to a minimum thickness of two (2) inches when compacted.

Special note is made of 401.3 (f) Pub. 408, "Condition of Existing Surface". The bituminous base course must be thoroughly cleaned and all defects remedied prior to the laying of the bituminous binder course.

- g. The Bituminous Wearing Course - The bituminous wearing course shall follow, be made up of, and be laid in accordance with the following specifications:

- For industrial, business and arterial streets, follow specifications of the Department of Transportation, Commonwealth of Pennsylvania, Pub. 408, Section 420, "Bituminous Wearing Course ID-2".
- For local residential streets, follow specifications of the Department of Transportation, Commonwealth of Pennsylvania, Pub. 408, Section 422, "Bituminous Wearing Course FJ-1".

The Bituminous Wearing Course shall be laid to a minimum thickness when compacted to one (1) inch.

Concrete Curbs - All new or rebuilt streets shall be constructed with concrete curbs in accordance with accepted standards and in compliance with the Materials and Method of Construction outlined below.

- a. Excavation - Excavation shall be made to the required depth, and the material upon which the curb is to be constructed shall be compacted to a firm, even surface. Where foundation underdrain is to be placed under the curb, the excavation for curb shall be made in conjunction with the excavation for the underdrain.
- b. Materials - The curb shall be built according to the latest edition of Pennsylvania Department of Transportation, Pub. 408, Section 630. Materials shall conform to Pennsylvania Department of Transportation, Pub. 408.

Class A Cement Concrete	Section 704
Premold Expansion Joint Filler	Section 705.1
Bar Dowels	Section 705.3
Joint Sealing Material	Section 705.4
Curing and Protection Covers	Section 711.1
Concrete Curing Compound	Section 711.2
Concrete Admixtures	Section 711.3
Bituminous Paper	Section 727

The aggregate used in the production of concrete under this contract shall be from sources currently approved by the Pennsylvania Department of Transportation, and conform to their Specifications, Pub. 408.

The minimum cement content shall not be less than 6.0 sacks per cubic yard of concrete, and shall have a 28-day compressive strength of 3300 psi.

The fresh concrete shall contain from 4% to 7% volume of entrained air. Air determinations may be made by the Engineer or his representative and such changes as are necessary to maintain the required air content shall be made as directed.

- c. Forms - The forms for the curb shall be of approved metal, except wood forms may be used on sharp curves and short tangent sections when approved by the Engineer. Forms shall be straight, free from warp, and of sufficient strength, when staked, to resist the pressure of the concrete without springing. At least 3 stakes shall be provided for each 10 feet. Metal forms shall be of approved section and shall have a flat surface on top and wood forms shall be 1-1/2 inch surfaced planks. These forms shall be of a depth equal to the depth of the curb, so designed as to permit secure fastening of face and back forms at the tops. These fastenings shall be designed that they will not obstruct satisfactory finishing and edging of the top of the curb and will permit removal of the face forms. The outside or back forms shall be straight from top to bottom. The inside of face forms shall have a better from the top of the curb to the finished surfact line of the pavement and shall be straight from this line to the bottom. Steel templets 1/8 inch in thickness, of the width of the curb, and not less than 2 inches longer than the depth of the curb shall be used to separate adjacent sections. All forms and templets shall be cleaned thoroughly and treated with an approved material, as required, to prevent the concrete from adhering thereto. Oil, tar paper, or other material which will adhere to or discolor the concrete shall not be used. Forms and templets which have become worn, bent, warped, or broken shall not be used. The forms shall be accurately set to line and grade in such a manner as to prevent settlement or displacement.
- d. Placing and Finishing Concrete - The concrete shall be placed in the forms in horizontal layers not to exceed 5 inches, and spaded sufficiently to eliminate all voids. An electric vibrator may be used with the permission of the Engineer. Where indicated or directed, drainage openings shall be made through the curb at the elevation and of the size required. The curb shall be depressed as indicated or directed. The top surfact of the curb shall be finished true to line and grade in a neat, smooth and even manner by means of wood floats, and the edges of the face and back shall be rounded to a radius of not more than 3/4 inch and 1/4 inch respectively, while the concrete is still plastic.
- e. Joints and Reinforcing - The curb shall be constructed in uniform lengths or sections of 10 feet, except where shorter sections are necessary for closures or curves, but no section shall be less than 4 feet. Premolded expansion joints 1/4 inch in thickness and cut to conform with the cross-section of the curb shall be placed at the ends of section of curved curb and at intervals of not more than 120 feet. Intermediate joints between sections shall be formed of 2 thicknesses of one-ply bituminous paper, cut neatly to the cross-section of the curb and 1 paper placed on each side of the template. If the method of handling the work is such that the templates are not removed satisfactorily, the curb shall be constructed in alternate sections.

When curved curb joins with tangent curb, at curb returns and on sharp curves where directed, there shall be embedded in the concrete 2 reinforcement bars 1/2 inch in diameter and 24 inches in length.

These bars shall be placed 3 and 12 inches respectively, below the top of the curb and in the center of its width, and shall extend 12 inches into the curb on each side of the joint. The portions of the bars extending into the tangent curb shall be rendered bondless with a coating of approved material, and enclosed in approved tubes or caps, which will provide a positive clearance pocket of at least 1/2 inch.

- f. Concrete Control Tests - During the progress of work, at least one set of 4 standard 6 inch concrete cylinders shall be made during each and every day of concreting operations. The cylinders of each set shall be molded from the same sample of concrete and shall be tested one at seven days and three at 28 days.
- g. Removal of Forms - The forms shall not be removed within 12 hours after the concrete has been placed. No rubbing to correct irregularities will be permitted until curing period has elapsed. Any irregular surface shall be corrected by rubbing with a carborundum stone. Brush refinishing or plastering will not be permitted and all reject curb shall be promptly removed and replaced. All joints in the curb shall be opened from top to bottom immediately after the forms are removed, and the edges adjacent to the joints shall be sharp and clean cut. After the forms are removed, minor defects shall be filled with mortar composed of 1 part cement and 2 parts fine aggregate.
- h. Curing - The curb shall be protected and cured in a manner approved as specified in Pennsylvania Department of Transportation, Pub. 408.
- i. Backfilling - After the concrete has attained the required strength, the spaces in back of the curb shall be backfilled with acceptable material in layers of not more than 4 inches in depth. Each layer shall be thoroughly compacted mechanically to the required elevation and cross-section.
- j. Finish Grading - Finish grading behind the curb shall be done to meet existing conditions at the right-of-way line with a material that is acceptable to the Township Engineer.

All existing lawns disturbed or altered during the construction shall be seeded with a quality seed that will restore the lawn to its original condition.
- k. Repair to Roadway Surface - All existing roadway surfaces disturbed or altered during the course of construction shall be restored to its original condition and to the satisfaction of the Township Engineer.

#### Section 504 STORM WATER MANAGEMENT, AND EROSION AND SEDIMENTATION CONTROL

- a. Open watercourses shall have adequate capacity and erosion control to ensure safe and healthful disposal of storm water.
- b. When topsoil has been removed from the surface of a lot on a slope where erosion will cause a displacement of loose material, the subdivider shall be required to seed or provide other means to prevent the wash from damaging adjacent property or accumulating on street surfaces.

In addition to the requirements of this Ordinance, all Major Subdivisions (and any Minor Subdivision that the Board of Commissioners may deem necessary) shall have a Soil Erosion and Sedimentation Control Plan and/or Permit and a Storm Water Management Plan and/or Permit. These Plans shall be prepared by the developer in accordance with current state laws, and reviewed and approved by the Erie County Conservation District. Permitted Plans shall be fully implemented during the construction of the Major Subdivision.

## Section 505 WATER SUPPLY

The work to be included is the installation of ductile cast iron pipe water main along with valves, hydrants and other appurtenances in accordance with accepted practice and in compliance with the materials and method of construction outlined below. The City of Erie, Bureau of Water shall approve the materials to be used and will have an inspector on site during construction.

After installation, completion of tests required and after the final inspection, the water main and appurtenances shall become the property of the City of Erie.

- a. Excavation - The contractor shall do all excavation of whatever substances encountered to the required minimum depth of 5½ feet below the finish grade. The banks of the trench shall be vertical. Width of the trench allowed shall be 12 inches on each side of pipe bell. Excavated material not suitable or not required for fill or backfill shall be removed from the site and disposed of at the contractor's expense.

Excavation around accessories shall allow for only 24 inches of clearance on all sides.

Excavation shall not be carried below the required level. Excess excavation shall be backfilled with sand, gravel, or concrete, as directed by the engineer, and thoroughly tamped at the contractor's expense.

Unstable or unsuitable material shall be removed and replaced with approved backfill of gravel, crushed stone or crushed slag, which shall be thoroughly tamped. The engineer shall determine the depth of removal of the unstable or unsuitable material.

The contractor shall remove by pumping, or other means approved by the engineer, any water accumulated in the excavation.

In rock, excavation shall be carried to 8 inches below the bottom of the pipe and special refill material shall be used to establish the proper grade by tamping thoroughly. This material shall be as stated in the materials section.

Sheeting, shoring, timbering and bracing will be required to maintain the excavation in a condition to furnish safe working conditions and to permit the safe and efficient installation of all items in strict accordance with all safety rules and regulations as prescribed by any governing organization.

The bottom of the trench shall be rounded so that an arc of the circumference equal to 0.6 of the outside diameter of the pipe rests on undisturbed soil. Bell holes shall be excavated accurately to size by hand.

- b. Materials - All materials shall be furnished by an established and reputable supplier or manufacturer. All materials shall be of first class ingredients and construction, designed and guaranteed to perform the service required and shall conform with the following specifications or shall be a product similar and equal thereto as approved by engineer and meeting City of Erie standards.



The pipe, hydrants, fittings, gate valves, valve boxes, tees, crosses and required accessories necessary for the installation of the water main and fire hydrants shall be supplied and installed by the contractor.

Concrete used for backfill or thrust blocks shall be ready-mixed concrete designed for 3300 psi compressive strength for 28 days and shall meet all the requirements for Class A concrete as specified in Section 704 of Pennsylvania Department of Transportation, Pub. 408.

Pipe shall be ductile cast iron pipe and shall be the "Tyton" joint type conforming to the A.S.A. specification A21.51. The pipe shall have a Class IV wall thickness and shall conform to the sizes required. The pipe and fittings shall be cement lined and bituminous seal coated on the inside and seal coated on the outside in accordance with A.S.A. specification A21.4. The cement lining thickness shall be 1/8 inch.

Fittings shall be gray iron, class 250, mechanical joint, short body fittings conforming to A.S.A. Specification A21.10. All accessories required for fittings shall conform to A.S.A. Specification A21.11.

Gate valves shall be bell end with mechanical joints and shall conform to the A.W.W.A. specifications C500-61 or latest revision. All mechanical joint accessories shall be furnished with the valve. The valve shall have double disc, parallel seat, side wing non-rising stem, and bronze mounted. All moving parts shall be accurately machined and all valves shall open to the right or clockwise.

Valve boxes shall be two piece screw type equal to the Buffalo Valve Box. The shaft shall be 5 1/4 inches, style B-5003, Catalog No. 21 of Buffalo Valve Box Company or equal with an extension of 36 to 48 inches. Covers shall be marked water.

Hydrants shall be equal to "Mathews Modernized Hydrant" (Model #M-62 bronze lines). They shall be mechanical joint hydrants with all accessories included. Connections shall be 3 - 2 1/2 inch connections and 1 - 4 inch streamer connection for both hose and pumper use. All bearings and parts working against each other shall be made of bronze or heavy bronze faced unless otherwise specified by the engineer. All hydrants shall be of the compression type, opening against and closing in the direction of normal water flow.

Special refill material used for bedding in rock excavation shall consist of sand, #57 aggregate, or as determined by the engineer, and shall conform to the specifications in Section 703.2 of Pennsylvania Department of Transportation, Form 408, for gradation of size. No sodium sulfate test will be required.

Special backfill material used for trench backfill shall consist of a well graded bank-run gravel in accordance with the following specification and should be free of any deleterious matter.

#### GRADATION REQUIREMENT

<u>Sieve Size</u>	<u>Percent Passing by Weight</u>
3"	100
3/8"	50 - 100
#4	40 - 85
10	30 - 75
40	15 - 45
200	5 - 15

Liquid Limit, 25% - Maximum Plasticity Index, 7 Maximum

- c. Joints - Joints shall be of "Tyton type conforming to A.S.A. specifications A21.11. If the ductile cast iron pipe is cut in the field, the end of pipe must be tapered back about 1/8 inch at an angle of about 30 degrees.
- d. Laying of Pipe - The City of Erie, Bureau of Water, shall provide an inspector to be present during construction of the water main and appurtenances. Material and construction shall be subject to the approval of the City of Erie inspector.

All water mains shall be true to line and within the minimum cover required. The pipe shall be kept thoroughly clean so that joining will be smooth and all joints will be watertight. All pipe, fittings, and valves shall be inspected for defects before being lowered into the trench, and if defects are found even after laying of the water main is completed, the defective item shall be removed and replaced with a new item. No water shall be allowed in the trench while pipes are being laid, and the exposed end shall be capped if left in trench for more than one hour without installing the next section. Not more than 100 feet of trench shall be opened in advance of the pipe laying unless permitted by the engineer.

The interior of the pipe shall be kept cleared of all dirt as the work progresses.

When setting hydrants, care shall be taken to set them in a vertical position. Inspection of the hydrant for defects and for proper working order shall be done.

Thrust blocks shall be constructed at tees, valves, bends, hydrants and/or as directed by the engineer. The blocks shall be of concrete as specified in the materials section. Blocks shall be poured on solid ground and shall be poured neat against solid undisturbed trench walls.

- e. Backfill - No water mains shall be backfilled above the top of the pipe until the elevations, alignment, and the pipe joints have been checked, inspected, and approved. No heavy rock or boulders more than 6 inches in diameter will be allowed within 3 feet of the pipe, and no stones over 1½ inches in diameter will be allowed in the first 18 inches of the backfill. The trench shall be backfilled evenly and carefully around and over the pipe in 6 inch layers and each layer shall be thoroughly mechanically tamped. Compaction shall be not less than 95% of standard proctor (ASTM D698-78).

Backfill around hydrants and valve enclosures shall be done in the same manner as for trench backfill. If necessary, hydrants and valve enclosures shall be braced during backfilling to insure a vertical position. Hydrant backfill shall consist of broken stone or coarse gravel in the amount not less than 10 cubic feet in accordance with City of Erie Standards. Tar paper shall be placed over the stone to prevent dirt and soil from working in and around the stone.

All backfill shall be tamped thoroughly to the required grade around hydrants, valve enclosures and other appurtenances as well as on the pipe lines.

When the excavated material is not satisfactory for backfill, the contractor shall secure special backfill material to use in backfilling operations. All surplus material, unsatisfactory material, earth, rubbish, or other debris shall be hauled away from the site and disposed of by the contractor.

- f. Sterilization - Before being placed in service, all new water lines shall be chlorinated to the satisfaction of the engineer in accordance with A.W.W.A. Specifications C601-54 or latest revision.

Prior to chlorination, all dirt, foreign matter shall be removed by a thorough flushing. This shall be done after the pressure test and leakage test and may be done either before or after the trench has been backfilled.

A chlorine gas and water mixture or hypochlorite solution shall be applied by means of a solution-feed device or the gas shall be fed directly from a chlorine cylinder equipped with proper devices for regulating the rate of flow and the effective diffusion of gas within the pipe.

Water from the existing distribution system or other source of supply shall be controlled to flow away slowly into the newly laid pipe line during the application of chlorine, in such proportions that the chlorine dose applied to the water entering the newly laid pipe shall be at least 40 to 50 parts per million.

Treated water shall be retained in the pipe long enough to destroy all non-spore forming bacteria. This period shall be at least twenty-four (24) hours and preferably longer as may be directed. In an emergency, at least three hours contact shall be provided for chlorination and chlorine dose rate shall be triple the required dose.

After the chlorine treated water has been retained for the required time, the chlorine residual at the pipe extremities and at other representative points shall be at least five (5) parts per million.

Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipe line at its extremities until the replacement water throughout its length shall, upon test, be equal to the water quality served from the existing water supply system.

Should initial treatment, in the opinion of the engineer, prove ineffective, the chlorination procedure shall be repeated until confirmed tests show that water sampled from the newly laid pipe conforms to the requirements. No main to be placed in service without the engineer's approval.

- g. Pressure Test of Water Lines - After the pipe has been laid, properly anchored, and partially backfilled with all joints exposed, all newly laid pipe or any valved section thereof shall be subjected to a hydrostatic pressure test of one hundred fifty (150) pounds per square inch or fifty percent (50%) above normal operating pressure, whichever is greater.

The tests shall be applied by means of a pump connected to the pipe in a manner satisfactory to the engineer. Tests shall be made using water as a medium. Use of compressed air or nitrogen is prohibited. The duration of each pressure test shall be at least a minimum of four (4) hours. During this period the drop in static pressure shall be carefully measured and shall in no instance exceed ten (10) psi per hour.

Care should be taken to see that the air is expelled and all caps and plugs are properly braced before the pressure is applied. Air should be expelled by opening of fire hydrants or taps at points of highest elevation.

All hydrostatic tests, etc., shall be performed by the contractor, under the supervision of the engineer.

All pipes, fittings, valves, hydrants and joints shall be carefully examined during the test, and all joints showing visible leakage shall be made tight. All defective pipes, joints, fittings, valves and hydrants shall be removed from the line and replaced by the contractor.

#### Section 506 SANITARY SEWERS

The work to be included is the installation of sanitary sewers in accordance with accepted practice and in compliance with the materials and method of construction outlined below.

- a. Excavation - The Contractor shall do all excavation of whatever substance encountered to the depth required to install the sewer to the required lines and grades. The banks of the trench shall be vertical. Width of trench allowed shall be 8 inches on each side of the pipe bell. Excavated material not suitable or not required for fill or backfill shall be removed from the site and disposed of.

Excavation for manholes shall allow for only 24 inches of clearance on all sides of the manhole.

Excavation shall not be carried below the required level. Excess excavation shall be backfilled with sand, gravel, or concrete, as directed by the engineer, and thoroughly tamped at the contractor's expense.

Unstable soil shall be removed and replaced with approved granular backfill material which shall be thoroughly tamped. The engineer shall determine the depth of removal of the unstable soil.

The Contractor shall remove by pumping, or other means approved by the engineer, any water accumulated in the excavation.

In rock, excavation shall be carried to 8 inches below bottom of pipe and special refill shall be used to establish the proper grade by tamping thoroughly.

The bottom of the trench shall be rounded so that an arc of the circumference equal to 0.6 of the outside diameter of the pipe rests on undisturbed soil. Bell holes shall be excavated accurately to size by hand.

- b. Materials - All materials shall be furnished by an established and reputable supplier or manufacturer. All materials shall be of first-class ingredients and construction, designed and guaranteed to perform the service required and shall conform with the following specifications or shall be a product similar and equal thereto approved by the Engineer.

Pipe shall be extra-strength vitrified clay pipe and shall conform to ASTM Specification C-200. All pipe shall be of the bell and spigot type.

Concrete used for encasements, manhole bases, and backfill shall be ready mixed cement concrete designed for 3300 psi compressive strength after 28 days and shall meet all the requirements for Class A concrete as specified in Section 704 of Pennsylvania Department of Transportation Pub. 408.

Mortar used for manholes shall be machine mixed in an acceptable manner at the site by the contractor and shall consist of one (1) part Portland Cement and two and one-half (2½) parts fine aggregate by volume. Water or other components shall not be introduced into this mix after removal from the mixer.

Special refill material used for bedding in rock excavation shall consist of sand or #57 aggregate, as determined by the engineer, and shall conform to the specifications in Section 703.2 of Pennsylvania Department of Transportation, Pub. 408.

Special backfill material used for trench backfill shall consist of a well graded bank-run gravel in accordance with the following specification and should be free of any deleterious matter.

GRADATION REQUIREMENT

<u>Sieve Size</u>	<u>Percent Passing by Weight</u>
3"	100
3/8"	50 - 100
#4	40 - 85
10	30 - 75
40	15 - 45
200	5 - 15

Liquid Limit, 25% - Maximum      Plasticity Index, 7 Maximum

Lumber used for sheeting may consist of any species which will satisfactorily stand driving. It shall be free from worm holes, loose knots, wind shakes, decayed or unsound portions, or other defects which might impair its strength or tightness. Minimum thickness shall be 2 inches nominal. Lumber for bracing shall be sound and shall be equal to or better than No. 2 common yard lumber.

- c. Joints - The extra strength vitrified clay pipe shall have compression type joints conforming to ASTM Specifications C-425, Type III.

- d. Laying of Pipe - All sewers shall be laid true to line and grade with the bells upstream or upgrade. The sections of the pipe shall be laid and fitted together then, when completed, the sewer will have a smooth and uniform invert. The pipe shall be kept thoroughly clean so that joining will be smooth and all joints will be watertight. Each pipe shall be inspected for defects before being lowered into the trench, and if defects are found even after laying of the pipe is completed, it shall be removed and replaced with a new pipe at the contractor's expense. No water shall be allowed in the trench while pipes are being laid, and the exposed end shall be capped if left in trench for more than one hour without installing the next section. Not more than 100 feet of trench shall be opened in advance of pipe laying unless permitted by the engineer.

The interior of the sewer shall be kept cleared of all dirt as the work progresses.

To check the amount of infiltration, the contractor shall furnish, install and maintain a V-notch sharp crested weir in a wood frame tightly secured at the low end of each sewer lateral and at locations on the main sewers directed by the engineer. Maximum allowable infiltration shall be 200 gallons\*per mile per inch of diameter of sewer per 24 hour day at any time. The joints shall be tight and visible leakage in the joints or leakage in excess of that specified above shall be repaired by any means found to be necessary. When infiltration is demonstrated to be within the allowable limits, the contractor shall remove such weirs.

Low pressure air testing as established by the National Clay Pipe Institute for determining defective pipe or pipe joints will also be accepted as a means of testing in place sanitary sewers.

All house connections will be furnished by laying a "Y" branch fitting with 6 inch spur and an extra strength medium length 30° curve with sufficient lengths of 6 inch straight pipe to bring the connection two (2) feet beyond the face of curb and a stopper or disc as a standard house connection unit. Extra lengths of 6 inch tile will be installed as directed by the engineer. A smooth grade of at least four (4) inches shall be utilized in these three (3) sections of pipe so that the invert on a standard house connection is four (4) inches or more higher than the invert at the intersection of the "Y" branch and the barrel of the 8 inch pipe.

The contractor shall place a hardwood stake on the property line at the end of each service connection. The hardwood stake shall be topped with a marker labeled "Sewer". The contractor shall locate and keep a record of all service connections by measurement to the nearest downstream manhole and shall deliver all measurements to the engineer.

- e. Line and Grade - The contractor must test the pitch or grade of the top line and sewer, and will be held responsible for the correct flow of the sewers. The contractor must test the batter line with an accurate line level to test the downward grade of the pipe in the direction of flow. Three batter boards will be erected at all times to check the batter line. No claim for extra work will be allowed for alleged inaccuracy of grade stakes. Each pipe will be checked with a gauge rod and a plumb bob for line and grade. A laser beam system may be used for line and grade subject to approval by the engineer.

- f. Backfill - No sewers shall be backfilled above the top of the pipe until the sewer elevations, gradient, alignment, and the pipe joints have been checked, inspected, and approved. No heavy rock or boulders more than 6 inches in diameter will be allowed within 3 feet of the pipe, and no stones over 1½ inches in diameter will be allowed in the first 18 inches of the backfill.

The space between the pipe and the side of the trench shall be backfilled in 4 inch layers and thoroughly tamped until a height of 1 foot above the pipe is reached, and then layers of 6 inches will be allowed before the tamping is performed. All backfill shall be tamped thoroughly to the required grade around all manholes, and other appurtenances as well as on the pipe line. Each layer shall be compacted to meet or exceed 95% of standard proctor (ASTM D698-78).

When the excavated material is not satisfactory for backfill, the contractor shall secure special backfill material to use in backfilling operations. All surplus material, unsatisfactory material, earth, rubbish, or other debris shall be hauled away from the site and disposed of.

- g. Manholes - Manholes shall be precast reinforced concrete construction with aluminum or plastic coated manhole steps and O-ring rubber gaskets. Precast manholes shall meet or exceed ASTM Specifications C-478. Eccentric cone top sections shall be used unless a variance or waiver is furnished in writing by the engineer.

A poured in place 8 inch concrete base of Class A concrete, as noted in the materials section, shall be constructed as a leveling pad before the precast manhole can be placed.

The Contractor may upon written request and written approval of the engineer construct brick or block manholes. All bricks and blocks shall conform to accepted standards and shall be new and clean. The brick shall conform to ASTM Specification C-32, and the block shall conform to ASTM Specification C-139.

Manhole frames and covers shall be equal to Allegany Foundry Co., frame pattern 650 and cover pattern 651. The frame casting and cover casting shall have the metal bearing areas that come in contact machine ground to dix in pairs, shall be marked as pairs, and shall be delivered in pairs.

#### Section 507 UTILITIES

Every lot in a subdivision shall be capable of being served by gas, electrical and telephone utilities and the necessary easements shall be provided. Utility distribution lines shall be installed within street rights-of-way or within properly designated easements. To the fullest extent possible, underground utility lines should be located in easements along the rear property lines but when local conditions require installation in street rights-of-way, lines shall not be installed beneath existing or proposed paved areas and in any case shall be installed prior to the placement of any paving.

#### Section 508 STREET LIGHTS

The developer shall be responsible for making the necessary arrangements with the Township and the appropriate public utility company to install street lighting fixtures. However, whether or not street lights are initially installed, the developer shall be responsible for providing utility easements for future street lighting installations upon consultation with the public utility company involved and the Board of Commissioners.

#### Section 509 STREET SIGNS

Street name signs of a type approved by the Board of Commissioners shall be installed at each street intersection by the subdivider, on locations specified by the Board of Commissioners.

#### Section 510 STREET TREES

Shade trees of deciduous hardwood types with minimum diameters of two (2) inches may be planted by the landowner or developer between the curb and the sidewalk, provided the planting strip is a minimum of four (4) feet wide. No tree shall be planted within two (2) feet of either side of a street right-of-way line.

In addition to the requirements of this Ordinance, tree planting or removal shall comply with the regulations of the Lawrence Park Township Tree Ordinance.

#### Section 511 SIDEWALKS

As of the effective date of this Ordinance, paved sidewalks shall be required to be installed, or arranged to be installed, by the lot owner or developer along all portions of a lot of record which are adjacent to a street right-of-way in the R-1, R-2 and B-1 Zoning Districts as delineated on the Official Zoning Map.

Within one (1) year of the effective date of this Ordinance, for existing developed lots without sidewalks within the above districts, the lot owner shall contact the Board of Commissioners to make arrangements to have said sidewalks installed. Within one (1) year after the construction of a principal building on an undeveloped lot of record within the above districts, said sidewalks shall be installed. A vacant lot owner shall have sidewalks installed within one (1) year after the construction of sidewalks on both sides of said vacant lot.

Sidewalks shall be placed along the inside edge, and within the street right-of-way unless deemed undesirable or unfeasible by the Board of Commissioners, where sidewalks may then be placed along the edge of the curbline. Paved driveways, between the sidewalk and street cartway shall also be required where vehicular access is desired to the lot.

Installation of sidewalks may be delayed until the street is paved and a curb/underground storm drainage system is installed.

The work to be included is the installation of concrete walks in accordance with accepted practice and in compliance with the Materials and Method of Construction outlined below.



The minimum width for sidewalks shall be four (4) feet, but the Board of Commissioners may require greater widths in the vicinity of shopping centers. Schools and recreation facilities, or where similar intensive urban uses are anticipated.

- a. Materials - The sidewalk shall be built according to the latest edition of Pennsylvania Department of Transportation Specifications, Pub. 408, Section 676. Materials shall conform to Pennsylvania Department of Transportation, Pub. 408.

Class A. Cement Concrete	Section 704
Aggregate Sub-base	Section 350.2
Premolded Expansion Joint Filler	Section 705.1
Concrete Curing Compound	Section 711.2
Curing and Protecting Covers	Section 711.1
Concrete Admixtures	Section 711.3

The aggregate used in the production of concrete under this contract shall be from sources currently approved by the Pennsylvania Department of Transportation, and conform to their Specifications, Pub. 408.

The minimum cement content shall not be less than 6.0 sacks per cubic yard of concrete, and shall have a 28-day compressive strength of 3300 psi.

The fresh concrete shall contain from 4% to 7% volume of entrained air. Air determinations may be made by the Engineer or his representative and such changes as are necessary to maintain the required air content shall be made as directed.

- b. Forms - The forms shall be of straight material, so placed as to conform to the proper grade and shall be of straight-grained lumber at least one and five-eighths inches in thickness or of steel of equal strength and suitable for form use.

The Township Engineer may upon inspection at any time condemn the use of either wood or steel forms, if in his opinion they are unfit for use as sidewalk forms. Flexible strips of approved type may be used on curves and shall be held rigidly to line and grade with properly placed stakes or braces. In no case shall forms be less than three and five-eighths inches in depth and in all cases the ground shall be undercut to provide a full four inch concrete slab thickness.

- c. Preparation - Excavation shall be done to a depth as necessary below the finished grade as established under these specifications or as necessary to clear the area of vegetation or other objectionable material, and a backfill of at least four inches of sub-base material shall be placed and compacted under all areas to be covered with concrete. Sub-base material shall be included unless specifically deleted by the Township Engineer.

In all cases where the surface of the ground is below the finished surface of the sidewalk, it will be necessary for the contractor to make a tamped earth fill on either side of the walk, bringing the fill flush with the top of the walk for a distance of one (1) foot from either side, the fill to have a slope to the original surface not to be less than three to one (3 to 1).

In all cases where the surface of the ground is above the finished surface of the sidewalk, it will be necessary for the contractor to continue his excavation a distance of at least one (1) foot on either side of the walk, at the finished grade of the walk, and then continue his cut to the original ground surface with a sideslope of at least 2 to 1, or as directed by the Township Engineer.

All castings, such as manhole tops, grates or areaways, water and gas stops, etc., shall be adjusted by the contractor to set even with the surface of the finished walk.

Forms shall be set so as to allow for square vertical edge and a thickness of a full four inches in walking areas and a minimum six inch walk in driveway areas and also to allow for a slope of the walk towards the curb which shall under regular conditions be  $\frac{3}{8}$  of an inch per foot.

The contractor shall adjust the grade at street corners so as to conform as nearly as possible to the curb grades on each street. In case of a great difference between the grade of two walks at a street corner, the Township Engineer shall be notified and he will give direction as to the extent that the surface of each walk may be warped to meet at the same grade at the corner.

Expansion joints shall be placed at all points where the proposed walk meets existing walk, curbs, driveways, catch basins, utility castings, etc., as well as at any point where the walk changes in direction forty-five degrees ( $45^{\circ}$ ) or more. In no case shall the distance between expansion joints be greater than 100 lineal feet. Expansion joints shall be placed to the full width of the walk and to separate the proposed walk completely from utility castings, curbs, etc.

- d. Depositing Concrete - After mixing, the concrete shall be handled rapidly and the successive batches deposited in a continuous operation, until individual sections are completed. Under no circumstances shall concrete that has partly hardened be used. The forms shall be filled and the concrete brought to the established grade.

Concrete shall not be deposited when it appears likely that the air temperature may fall below 40 degrees F. during the pouring or within the following 24 hours unless preparations are made and precautions taken to prevent any damage to the concrete resulting from the low temperatures. When placing concrete in cold weather, the contractor shall plan and prosecute his work in a manner which will assure satisfactory results. Concrete shall not be deposited on a frozen foundation. Any concrete damage by freezing shall be removed and replaced by the contractor at his own expense.

- Concrete when deposited in the forms shall have a temperature of not less than 55 degrees F., nor more than 100 degrees F. The concrete shall be maintained at not less than the minimum temperature of 55 degrees for at least 72 hours after placing, or longer if necessary, until the concrete has thoroughly hardened.

The walk shall be cut into square slabs not exceeding fifty (50) square feet in area by cutting the slab or by use of forms. Cuts shall be continuous and shall be cut to a depth of at least one-third (1/3) of the slab thickness. The cuts shall be made straight across the center lengthwise, in all walks over eight feet wide and straight across in all widths of walks. After the initial cut, the concrete shall be finished as later specified and final cuts shall be made with a trowel on line of previous cuts to at least one-third (1/3) of the slab thickness, and the cuts creased and outer edge rounded with finishing tool having one-half (1/2) inch radius. Lines for all cuts must be marked on forms before cuts are made. Where division plates are used, the surface edges of each slab shall be rounded to a one-half inch (1/2") radius before removal of division plates.

After the concrete has been brought to the established grade by means of a strike-board, it shall be worked to give a medium tough surface. In no case shall dry cement or a mixture of dry cement and sand be sprinkled on the surface to absorb moisture or to hasten hardening. The surface shall be floated with a wooden float only, producing an even gritty finish. On wide sidewalks the finish may be done with two applications of a canvas belt, not less than six (6) inches wide, and two (2) feet longer than the width of the sidewalk. For the first application, the belt shall be drawn across the surface with vigorous strokes at least twelve (12) inches long, and moved ahead very slightly with each stroke. The second application shall be given immediately after the water glaze or sheen disappears. The stroke of the belt shall be not more than four inches but the longitudinal motion shall be greater than during the first application. No other method shall be used unless approved by the Township Engineer prior to the installation.

The surface edges of all slabs shall be rounded to a radius of one-half (1/2) inch.

Concrete walks shall be protected from rain storms by a tarpaulin or by a covering of wet paper and sand, and protected during the hot weather, after setting for a few hours by being covered with sand and wet every day for three days. A chemical curing agent, as approved by the Township Engineer, may be used in place of wet sand. A barricade of at least three feet in height shall be placed around the walk to protect it while setting.

Red lights must be maintained all night on barricades and on all materials piled outside the property line as long as they remain in the public thoroughfare.

- e. Testing - The Contractor shall at his expense have four (4) cylinders made and tested, one (1) at seven (7) days and three (3) at twenty-eight (28) days to verify the compressive strength of the concrete. One set of cylinders shall be required for every additional one hundred (100) cubic yards of concrete poured.

A discrepancy of ten (10) percent of the requirements shall be cause for complete replacement. However, any discrepancy shall, and will, at the Township Engineer's option, be cause for replacement.

ARTICLE 6  
PLAN SPECIFICATIONS

Section 601 SKETCH PLAN

A subdivision Sketch Plan may be submitted by the subdivider or property owner as a basis for informal and confidential discussion with the Planning Commission.

Data furnished in a Sketch Plan shall be at the discretion of the subdivider. It is suggested that the following items be included in the Sketch Plan presentation. The presentation need not be to scale and the precise dimensions are not required.

- a. Tract boundary.
- b. North Point.
- c. Streets on and adjacent to the tract.
- d. Topographical and physical features. (Use of U.S.G.S. 7½, 1" = 2000' scale quadrangle maps suggested.)
- e. Proposed general street layout.
- f. Proposed general lot layout.
- g. Existing Zone District in which subdivision is located.

Section 602 PRELIMINARY PLAN

The Preliminary Plan and other supplementary material required which is to be submitted to the Board of Commissioners for conditional approval should be drawn at a scale of either 50 or 100 feet to the inch or at the largest practical scale. If the Preliminary Plan is drawn in two (2) or more sections, it shall be accompanied by a key map showing the location of the various sections. The Preliminary Plan and its copies may be on any practical size sheets. Copies of the Preliminary Plan may be either prints or photocopies.

The Preliminary Plan shall show the following information as a minimum:

- a. Proposed subdivision name or identifying title.
- b. Name and address of the owner of the tract or of his authorized agent, if any, and of the subdivider.
- c. North point, graphic scale and date.
- d. Total acreage of the tract and number of lots.
- e. Zoning requirements - district and minimum lot size. Any changes that may be proposed in the provisions of the zoning applicable to the area to be subdivided; and suggested locations of buildings in connection therewith.

- f. Tract boundaries showing distances and bearings.
- g. Contours at vertical intervals of five (5') feet for all land subject to flooding and all land within the Lake Erie bluff recession hazard area.
- h. The names of all owners of all immediately adjacent unplotted land; the names of all proposed or existing subdivisions immediately adjacent, and the locations and dimensions of all existing streets, alleys, crosswalks, railroads, storm drainage or lines, public sewer and water mains and feeder lines, fire hydrants, gas, electric, telephone and cable transmission lines, water courses, and other significant features within 100 feet of any part of the property proposed to be subdivided; and the location of all buildings and approximate location of all tree masses within the property.
- i. The location and widths of any streets or other public ways or places shown upon an adopted Master Plan, if such exists within or adjacent to the tract to be subdivided.
- j. The full plan of the development, showing the location of all proposed streets, alleys, crosswalks, utility easements, parks, playgrounds, and other public areas; sewer, water and storm water facilities; proposed building setback lines for each street, proposed lot lines and approximate dimensions of lots; lot number and/or block number in consecutive order; and all streets and other areas designed for appurtenant facilities, public use, or proposed to be dedicated or reserved for future public use, together with the condition of such dedications or reservations.
- k. A key map, for the purpose of locating the site to be subdivided at a minimum scale of 2,000 feet to the inch, showing the relation of the tract to adjoining property and to all streets, schools, parks and municipal boundaries existing within 1,000 feet of any part of the property proposed to be subdivided.
- l. Tentative cross-sections and center-line profiles for each proposed street shown on the Preliminary Plan. These profiles may be submitted as separate sheets.
- m. Results and locations of percolation tests, made in accordance with the specifications of the Erie County Health Department shall be submitted if on-lot sewage systems are to be used.
- n. Preliminary designs of any bridges or culverts which may be required. These designs may be submitted as separate sheets.
- o. Where the Preliminary Plan submitted covers only a part of the subdivider's entire holding, a sketch of the prospective future street system of the unsubmitted part shall be furnished; the street system of the submitted part will be considered together with adjustments and connections with future streets in the part not submitted.

- p. Proposed street name for each proposed street shown on the Preliminary Plan.
- q. A draft of any proposed covenants to run with the land.
- r. A tentative timetable for the proposed sequence of development for the subdivision, if said subdivision is to be developed in sections.
- s. Statement of intentions regarding installation of required improvements or furnishing performance bond or other suitable security in lieu of such installations.

#### Section 603 FINAL PLAN

The Final Plan and other supplementary material required which is to be submitted to the Board of Commissioners for approval and subsequent recording shall be drawn with India Ink on a transparent reproduction of the Final Plan with black line on stable plastic base film. The Final Plan shall be drawn at a scale of either 50 feet or 100 feet to the inch or at the largest practical scale. If the Final Plan is drawn in two (2) or more sections, it shall be accompanied by a key map showing the location of the various sections. The Final Plan and its copies shall be on eighteen by twenty-four (18 x 24) inch sheets. Copies of the Final Plan shall be either black on white or blue on white prints.

The Final Plan shall show the following information as a minimum:

- a. Name of the subdivision.
- b. Name and address of the owner and subdivider.
- c. North point, graphic scale and date.
- d. Block and lot numbers (in consecutive order), dimensions, minimum area and total number of lots; acreage of whole development density and use of land.
- e. Source of title to the land of the subdivision and to all adjoining lots, as shown by the books of the Erie County Recorder of Deeds, names of the owners of all adjoining unsubdivided land; the Erie County Tax Assessment Bureau municipality-map-block-parcel number(s) for the tract to be subdivided.
- f. Lot lines with accurate bearings and distances. Distances to be to the nearest hundredth of a foot.
- g. Lot areas calculated to the nearest square foot exclusive of any street, alley or crosswalk right-of-way.
- h. Accurate dimensions of existing public land and of any property to be dedicated or reserved for public, semi-public, or community use, and all areas to which title is reserved by owner.

- i. Accurate boundary lines, with dimensions and bearings, which provide a survey of the tract, closing with an error of not more than one (1) foot in ten thousand (10,000) feet.
- j. Accurate distances and directions to the nearest established street corners or official monuments. Reference corners shall be accurately described.
- k. Complete curve data for all curves, including radius, delta angle, tangent, arc, and chord.
- m. Street names.
- n. Location and material of all permanent monuments and lot markers.
- o. Easements for utilities or access and any limitations on such easements.
- p. Setback lines and lot sizes not less than the minimum as fixed by the Lawrence Park Township Zoning Ordinance.
- q. A location map of the subdivision at a minimum scale of 2,000 feet to the inch, showing the relation of the property to adjoining property and to all streets and municipal boundaries existing within 1,000 feet of any part of the property proposed to be subdivided.
- r. The following certificates, where applicable, shall be shown on the Final Plan and its copies:
  - Certification, with seal, by a registered professional engineer or registered land surveyor to the effect that the survey and plan are correct.
  - Certificate for the review of the County Planning Department.
  - Certificate for the review and recommendation of approval by the Planning Commission.
  - Certification, duly acknowledged before a notary public, with seal, and signed by the owner or owners of the property, to the effect that the subdivision shown on the Final Plan is the act and deed of the owner, that he (the subdivider) is the owner of the property shown on the survey and plan, and that he desires the same to be recorded as such.
  - Certificate for approval by the Board of Commissioners.
  - A certificate to provide for the recording information.

s. The Final Plan shall be accompanied by the following material:

- Final profiles, cross-sections, and specifications for street improvements, and sanitary and storm sewerage, and water distribution systems shall be shown on one (1) or more separate sheets.
- All covenants running with the land governing the reservation and maintenance of dedicated or undedicated land or open space, which shall bear the certificate of approval of the municipal Solicitor as to their legal sufficiency.
- Certificate of dedication of streets and other public property. (This is the offer of dedication.)
- Where lot sizes are based on public water and/or public sewer facilities, assurance acceptable to the Board of Commissioners that such facilities will be installed.
- Such certificates of approval by proper authorities of the State and the Township as may have been required by the Board of Commissioners, including certificates approving the water supply system and sanitary sewer system of the subdivision.
- One of the following for guaranteeing improvements:

A certificate from the subdivider and signed by the municipal Engineer that all improvements and installations in the subdivision required by this Ordinance have been made or installed in accordance with specifications; or

A certificate from the subdivider and signed by the municipal Solicitor that a bond, certified check, or other security satisfactory to the Board of Commissioners has been filed with the Township.



ARTICLE 7  
ADMINISTRATION

Section 701 FILING FEE

The filing fee shall be as fixed annually by the Board of Commissioners by resolution. Any additional costs of review, design, inspection or maintenance by the Township and/or the municipal Engineer and Solicitor shall be borne by the applicant.

Section 702 INSPECTION

When the plans of streets and other improvements have been approved as provided in this Ordinance, the subdivider shall first notify the Board of Commissioners of his intention to proceed with the construction or installation of said streets and improvements; notification shall be made at least forty-eight (48) hours before any such construction or installation shall commence so as to give the Board of Commissioners or the municipal Engineer an opportunity to inspect the site prior to commencement of work and to inspect installation or construction of said streets and improvements during the course of work being performed.

Section 703 MAINTENANCE

Prior to any street, or other improvement being accepted by the Township as herein provided, the subdivider shall post a maintenance bond and/or other security naming the Township as Obligee in an amount deemed adequate by the Board of Commissioners to remedy any defects which are caused by defective or inferior materials or workmanship which may develop during a period of two (2) years from date of acceptance by the Township.

Section 704 APPEALS

In any case where the Board of Commissioners disapproves a subdivision plan, any person aggrieved thereby may, within thirty (30) days thereafter, appeal to the Court of Common Pleas of Erie County, Pennsylvania in accordance with Section 512 of the Pennsylvania Planning Code.

Section 705 PENALTIES

Any person, partnership, or corporation who or which being the owner or agent of any lot, tract, or parcel of land shall lay out, construct, open or dedicate any street, sanitary sewer, storm sewer, water main or other improvements for public use, travel or other purposes or for the common use of occupants of buildings abutting thereon, or who sells, transfers or agrees or enters into an agreement to sell any land in a subdivision or land development whether by reference to or by other use of a plat of such subdivision or land development or erect any building thereon, unless and until a final plat has been prepared in full compliance with the provisions of this Ordinance and of the regulations adopted hereunder and has been recorded as provided herein, shall be guilty of a misdemeanor, and upon conviction thereof, such person, or the members of such partnership, or the officers of such corporation, or the agent of any of them, responsible for such violation

pay a fine not exceeding one thousand dollars (\$1,000) per lot or parcel or per dwelling within each lot or parcel. All finds collected for such violations shall be paid over to the Township. The description by metes and bounds in the instrument of transfer or other document used in the process of selling or transferring shall not exempt the seller or transferor from such penalties or from the remedies herein provided.

APPROVAL PAGE

Recommendation of approval by the Lawrence Park Township Planning Commission  
this \_\_\_\_\_ day of \_\_\_\_\_, 1984.

\_\_\_\_\_  
Chairman

\_\_\_\_\_  
Member

\_\_\_\_\_  
Member

\_\_\_\_\_  
Member

\_\_\_\_\_  
Member

\_\_\_\_\_  
Member

\_\_\_\_\_  
Member

ATTEST: \_\_\_\_\_

Planning Commission Secretary

Approved and adopted by the Board of Commissioners of Lawrence Park Township this  
\_\_\_\_\_ day of \_\_\_\_\_, 1984.

\_\_\_\_\_  
President

\_\_\_\_\_  
Member

\_\_\_\_\_  
Member

\_\_\_\_\_  
Member

\_\_\_\_\_  
Member

ATTEST: \_\_\_\_\_

Township Secretary

NOAA COASTAL SERVICES CENTER LIBRARY



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